

REMARKS

Applicants respectfully request reconsideration and allowance of the present application.

Currently, claims 31-65 remain pending in the present application, including independent claims 31, 43, 52, and 58, and 59. For example, independent claim 31 is directed a heat transfer material comprising a non-transferable portion and a transferable portion overlying the nontransferable portion. The non-transferable portion comprises a substrate layer and a release coating layer. The transferable portion comprises a peelable film layer overlying the release coating layer and an opaque crosslinked polymer layer overlying the peelable film layer. The peelable film layer is melt-flowable at a transfer temperature.

In the Office Action, all of the pending claims were rejected based on the judicially created doctrine of non-statutory double patenting. Applicants agree to consider providing a terminal disclaimer to overcome the rejection.

Also, claim 58 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicants respectfully disagree with this rejection. Claim 58 requires that the transferable portion comprise a peelable film layer overlying the release coating layer (of the non-transferable portion) and an opaque crosslinked polymer layer overlying the peelable film layer. As written, claim 58 requires that the opaque crosslinked polymer layer overlies the peelable film layer which overlies the release coating layer.

In the Office Action, claims 31-40, 42-45, 47-54, 56-57, and 59-65 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,863,781 issued to Kronzer in view of U.S. Patent No. 5,468,532 issued to Ho, et al. Kronzer is directed to a melt transfer web having a conformable layer which enables the melt transfer web to be used to transfer print to uneven surfaces. For example, the melt transfer web includes a carrier substrate sandwiched between a top barrier layer and a bottom barrier layer. A conformable layer is coated on top of the top barrier layer and a release layer is coated on top of the conformable layer. Alternatively, the conformable layer and the release layer may be a single composite layer.

Referring to Kronzer, the transferable portion of the melt transfer web includes the ink layer, a release layer, and a conformable layer. The conformable layer will, when heated, soften and flow in order to allow the ink to contact uneven workpiece surfaces. Col. 5, lines 29-31. Kronzer also discloses that as heat and pressure are applied to the overlying melt transfer webs, the conformable-release layer (used as a combined layer in this embodiment) begins to soften and flow. Col. 6, lines 43-45. As such, Kronzer teaches that both the release layer and the conformable layer are melt flowable at the transfer temperature.

In contrast, independent claim 31 requires that the transferable portion comprise a peelable film layer overlying the release coating layer and an opaque crosslinked polymer layer overlying the peelable film layer. The peelable film layer is melt-flowable at a transfer temperature. Referring to the present application, due to formation of a cross-linked three-dimensional structure, the crosslinked polymer layer does not appreciably flow at the transfer temperatures. Pg. 10, lines 9-12. Instead, the

crosslinking agent holds the opaque coating on the surface of the fabric while the peelable film melts and penetrates into the fabric and bonds the image permanently.

Pg. 4, lines 2-5.

Not only does Kronzer fail to disclose or suggest a crosslinking agent or a crosslinked polymer in any layer of the transferable portion, as admitted by the office action, Kronzer also fails to provide any motivation to modify either the release layer (or the conformable layer) as suggested by the Office Action. In fact, Applicants respectfully submit that adding a crosslinked polymer to either of these layers would adversely affect the function of these layers since the addition of a crosslinked polymer would affect the melt flowable characteristics of those layers.

Applicants further submit that any motivation for modifying one of the transferable layers of Kronzer with a crosslinking agent can only stem, improperly, from the present application. Plainly, the Examiner's only incentive or motivation for so modifying Kronzer to include a crosslinked polymer in the manner suggested in the Office Action results from using Appellant's disclosure as a blueprint to reconstruct the claimed invention out of isolated teachings in the prior art, which is improper under 35 U.S.C. § 103. Accordingly, it is respectfully submitted that any such modification of the cited references relies on the impermissible use of hindsight, which cannot be successfully used to support a prima facie case of obviousness.

Specifically, the Office Action cites Ho, et al. as teaching the use of cross-linking agents incorporated into acrylic polymers in thermal or hot transfer media in an attempt to modify Kronzer. Ho, et al. teaches that the color layers comprise a binder, a color agent, and various optional ingredients. Column 3, lines 40-43. The binder may include

a copolymeric binder that may be crosslinked. Column 3, lines 46-49; Column 4, line 59. However, Ho, et al. discloses the use of this crosslinked binder only in the color layers of Ho, et al. Column 3, lines 40-42.

Applicants respectfully submit that one of ordinary skill in the art would not be motivated to use the crosslinked binders of Ho, et al.'s color layer in the release layer of Kronzer for additional reasons to those discussed above. The crosslinked binder is disclosed in Ho, et al. as influencing the properties of the color layer. Column 4, lines 60-62. Nowhere does Ho, et al. disclose or suggest the use of crosslinked binders in a release layer that does not contain color. In Kronzer, the release layer overlies ink to protect the ink once applied to a substrate. Applicants submit that modifying the release layer of Kronzer with the color layer of Ho, et al. would adversely affect the function of the release layer of Kronzer because adding color to the release layer would cover and obscure the ink.

Additionally, claims 52-56 and 59-65 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kronzer in view of U.S. Patent No. 5,362,548 issued to Hiyoshi, et al. As explained above, no motivation exists to use a crosslinking agent or a crosslinked polymer in the layers of Kronzer. In order to overcome the deficiencies of Kronzer, Hiyoshi, et al. is cited as teaching a color ink layer containing a coloring agent, binders of vinyl resins, and epoxy resins. However, Applicants respectfully submit that one of ordinary skill in the art would not be motivated to combine the teachings of the color layer of Hiyoshi, et al. into the release layer of Kronzer. As discussed above, in Kronzer, the release layer overlies the ink layer to protect the ink once applied to a substrate. Applicants submit that modifying the release layer of Kronzer with the color

layer of Hiyoshi, et al. would adversely affect the function of the release layer of Kronzer. Specifically, a release layer of Kronzer incorporating the pigments and epoxy resin, as disclosed in Hiyoshi, et al. would not allow the ink of Kronzer to show through the release layer.

Furthermore, independent claims 58 and 59, directed to methods, are patentable over the cited references. For example, nowhere does the cited references disclose or suggest the limitations of independent claim 58, such as removing a non-transferable portion of a heat transfer material from a transferable portion and placing the peelable film layer of the transferable portion on the surface with the opaque crosslinked polymer layer exposed. None of the cited references disclose or suggest any method that would lead one of ordinary skill in the art to the embodiment claimed in independent claim 58.

Applicant also respectfully submits that for at least the reasons indicated above relating to the corresponding independent claims, the pending dependent claims patentably defined over the cited references. However, Applicants also note that the patentability of the dependent claims certainly does not hinge on the patentability of the independent claims. In particular, it is believed that some or all of these claims may possess features that are independently patentable, regardless of the patentability of the independent claims.

Should any further questions or concerns arise after consideration of this Response, Examiner Dicus is invited and encouraged to contact the undersigned.

Appl. No. 10/003,697
Amdt. Dated December 20, 2005
Reply to Office Action of Aug. 10, 2005

Please charge any additional fees required by this Response to Deposit Account
No. 04-1403.

Respectfully requested,
DORITY & MANNING, P.A.

A handwritten signature in black ink, appearing to read 'A. R. Marshall', written over a horizontal line.

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